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Docket No.	In re: patent/	_ trademark application of
Applicant(s) T. Rapi	paport et	al
Serial No. 09/6/8/4	Date Filed	9-25/00 PE 40
Papers filed herewith on 6	10-03	JUN 1 0 2003
	count No. (if applicabl Assignment cha	rge; Extension and Ethic;
Amendment	Notice of Appeal	Appeal Brief
Sheets of Drawings	Proposed Drawing	Corrections (w/ drawings)
Change of Address	Request for Extens	sion of Time
Assignment	Recordation Form	Cover Sheet
Information Disclosure Stat	ement PTO-1	449 and associated art (15 docs.)
Priority Document(s)		
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re patent application of

T. RAPPAPORT ET AL.

Serial No.: 09/668,145

Group Art Unit: 2122

Filed: September 25, 2000

Examiner: not yet assigned

For: SYSTEM AND METHOD FOR DESIGN, TRACKING, MEASUREMENT,

PREDICTION AND OPTIMIZATION OF DATA COMMUNICATION NETWORKS

Commissioner for Patents PO Box 1450 Alexandria, Virginia 22313-1450

INFORMATION DISCLOSURE STATEMENT

Sir:

Under the provisions of 37 C.F.R. 1.97 through 1.99 and pursuant to applicant's duty of disclosure under 37 C.F.R. 1.56, applicant respectfully brings the following documents, listed on the attached form PTO-1449, to the attention of the Examiner in charge of the above-identified application. Copies of the listed documents are provided herewith for the convenience of the Examiner.

This citation does not constitute an admission that the references are relevant or material to the claims. They are only cited as constituting related art of which the applicant is aware.

It is respectfully requested that the listed references be considered by the Examiner and formally made of record in this application.

Please charge any deficiencies in fees and credit any overpayment of fees to Attorney's Deposit Account No. 50-2041.

Respectfully submitted,

Michael E. Whitham Registration No.: 32,635

Whitham, Curtis & Christofferson, PC 11491 Sunset Hills Road, Suite 340 Reston, Virginia 20190 703-787-9400

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EXAMINER INITIAL	REF	DOCUMENT NUMBER	ADEMARK DATE	NAME	CLASS	SUBCLASS		NG DATE
x .	1	4,675,147	6-23-87	Schaefer et al.			4-6-83	ROPRIATE
	2	4,736,453	4-5-88	Schloemer			12-10-8	85
	3	4,885,694	12-5-89	Pray et al.			4-29-87	7
	4	5,111,392	5-5-92	Malin			6-9-89	·
	5	5,119,307	6-2-92	Blaha et al.			12-22-8	 39
	6	5,239,487	8-24-93	Horejsi et al.			10-24-9	
	7	5,293,640	3-8-94	Gunmar et al.		 		
	8	5,307,261	4-26-94	Maki et al.		 	6-28-91	 -
	9	5,337,149	8-9-94	Kozah et al.			11-12-9	
	10	5,339,184	8-16-94	Tang			6-15-92	
	tı	5,375,123	12-20-94	Andersson et al.				······································
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02560038AA	Docket Numb	er (Optional)	
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Application Number

09/668,145

Applicant(s)

T. Rappaport et al.

Filing Date

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APR 0 5 2005 9/25/00 S. PATENT DOCUMENTS EXAMINER DOCUMENT NUMBER DATE NAME FILING DATE INITIAL CLASS SUBCLASS IF APPROPRIATE 12 5,394,522 2-28-95 Sanchez-Frank et al. 9-13-93 13 5,450,615 9-12-95 Fortune et al. 12-22-93 14 5,458,123 10-17-95 Unger 4-29-94 15 5,465,390 11-7-95 Cohen 2-12-93 16 5,482,050 1-9-96 Smokoff et al. 2-17-94 17 5,485,568 1-16-96 Venable et al. 10-8-93 18 5,491,644 2-13-96 Pickering et al. 9-7-93 19 5,491,837 2-13-96 Haartsen 3-7-94 20 5,493,679 2-20-96 Virgil et al. 10-29-93 21 5,515,269 5-7-96 Willis et al. 11-8-93 5,528,518 6-18-96 Bradshaw et al. 10-25-94 FOREIGN PATENT DOCUMENTS REF DOCUMENT NUMBER DATE COUNTRY Translation CLASS SUBCLASS YES NO OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.) **EXAMINER** DATE CONSIDERED

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP Section 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Docket Number (Optional) Application Number 02560038AA INFORMATION DISCLOSURE 09/668,145 Applicant(s) (Use several sheets if necessary) T. Rappaport et al. Filing Date APR 0 5 2005 Group Art Unit 9/25/00 U.S. PATENT DOCUMENTS & TRAD EXAMINER DOCUMENT NUMBER NAME CLASS INITIAL SUBCLASS FILING DATE IF APPROPRIATE 23 5,539,665 7-23-96 Lamming et al. 7-25-94 24 5,553,312 9-3-96 Gattey et al. 6-20-94 25 5,553,620 9-10-96 Snider et al. 5-2-95 26 5.555,354 9-10-96 Strasnick et al. 3-23-93 27 5,561,841 10-1-96 Markus 28 5,564,070 10-8-96 Want et al. 7-30-93 29 5,594,946 1-14-97 Menich et al. 2-28-95 30 5,598,532 1-28-97 Liron 10-21-93 31 5,625,827 4-29-97 Krause et al. 12-23-94 32 5,636,344 6-3-97 Lewis

FOREIGN PATENT DOCUMENTS

	REF	DOCUMENT NUMBER	DATE COUNTRY	BOCUMEN I NUMBER DATE COUNTRY CLASS	CLASS	SUBCLASS	Translation	
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5,689,355

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Docket Number (Optional) Application Number 02560038AA 09/668,145 Applicant(s) (Use several sheets if necessary) T. Rappaport et al. Filing Date Group Art Unit APR 0 5 2005 9/25/00 U.S. PATENT DOCUMENTS EXAMINER DOCUMENT NUMBER TRADE INITIAL NAME CLASS FILING DATE SUBCLASS IF APPROPRIATE 34 5,761,093 6-2-98 Urbish et al. 5-8-97 35 5,794,128 8-11-98 Brockel et al. 9-20-95 36 5,799,154 8-25-98 Kuriyan 6-27-96 37 5,809,282 8-15-98 Cooper et al 6-7-95 38 5,815,395 9-29-98 Hart et al. 6-29-95 39 5,828,960 10-27-98 Tang et al. 3-31-95 40 5,831,610 11-3-98 Tonelli et al. 2-23-96 41 5,832,389 11-3-98 Dent 4-3-96 42 5,861,887 1-19-99 Butler et al. 12-5-95 43 5,867,112 2-2-99 Kost 5-14-91 44 5,877,777 3-2-99 Colwell 4-7-97 FOREIGN PATENT DOCUMENTS REF DOCUMENT NUMBER DATE COUNTRY CLASS SUBCLASS OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

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Docket Number (Optional) 02560038AA Application Number

09/668,145

Applicant(s)

T. Rappaport et al.

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U.S. PATENT DOCUMENTS

INITIAL	REF	DOCUMENT PHANEEN AND	DATE	NAME	CLASS	SUBCLASS	PILIN IF APPR	G DATE OPRIATE
	45	5,878,328	3-2-99	Chawla et al.			12-21-9	
<u>.</u>	46	5,907,850	5-25-99	Krause et al.			1-21-97	
	47	5,917,808	6-29-99	Kosbab			1-17-97	
	48	5,923,850	7-13-99	Barroux			6-28-96	
	49	5,926,762	7-20-99	Arpec et al.			5-17-96	
	50	5,940,196	8-17-99	Piehler et al.			5-16-97	
	51	5,945,976	8-31-99	Iwamura et al.			12-10-96	6
	52	5,948,055	9-7-99	Pulsipher et al.		<u> </u>	8-29-96	
	53	5,949,335	9-7-99	Maynard			4-14-98	
	24	5,949,988	9-7-99	Feisullin et al.			4-3-97	
	15	5.953,669	9-14-99	Stratis et al.			12-11-97	
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Applicant(s)

T. Rappaport et al.

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Group Art Unit

EXAMINER INITIAL	REF	DOCUMENT NUMBER	THADEMA	SU.S. PATENT DOCUMENTS	CLASS	SUBCLASS	FILING DATE
£	56	5,963,867	10-5-99	Reynolds et al.		- 3 - 3 - 2 - 2 - 2 - 2 - 2 - 2 - 2 - 2	IF APPROPRIAT
	57	5,970,406	10-19-99	Komara	_	 	8-16-95
	58	5,987,328	11-16-99	Ephremides et al.			12-31-96
	59	6,006,021	 				4-24-97
	60	6,018,625	12-21-99	Tognazzini			7-1-96
			1-25-00	Hayball et al.			8-27-97
	61	6,021,316	2-1-00	Heiska et al.			
	62	6,032,105	2-29-00	Lee et al.			7-31-97
	63	6,038,547	3-14-00	Casto		·	1-7-98
	64	6,044,273	3-28-00	Tekinay			12-10-96
	65	6,058,102	5-2-00	Drysdale et al			11-6-98
	66	6,058,262	5-2-00	Kawas et al.			4-18-97
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Á	67	6,059,842	5-9-00	Dumaro	t et al.			4-14-98
	68	6,061,722	5-9-00	Lipa et	al.			12-23-96
	69	6,075,541	6-13-00	Maclino	vsky			11-7-97
	70	6,088,522	7-11-00	Lee et al	L			7-31-97
	71	6,104,699	8-15-00	Holende	r et al.			
	7 2	6,108,309	8-22-00	Cohoe et	al.			12-8-97
	73	6,111,857	8-29-00	Soliman	et al.	 		9-11-97
ī	74	6,122,083	9-19-00	Ohta et a	ıl.	 		10-3-94
	75	6,148,010	11-14-00	Sutton et	al.			6-24-98
	76	6,199,032	3-6-01	Anderson	n			7-22-98
	77	6,204,813	3-20-01	Wadell e	t al.	<u> </u>		2-20-98
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INFORMATION DISCLOSURE CITATION (Use several sheets if necessary) APR 0 5 2005

Docket Number (Optional) 02560038AA

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Application Number

09/668,145

Applicant(s)

T. Rappaport et al.

Filing Date

Group Art Unit

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EXAMINER INITIAL	REF	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCI.ASS	FILE	NG DATE ROPRIATI
1	78	6,208,833	3-27-01	Preschutti et al.			6-24-9	
	79	6,229,540	5-8-01	Tonelli et al.			10-13-9	98
	80	6,253,086	6-26-01	Parantainen et al.			3-25-99)
	81	6,285,377	9-4-01	Greenbaum et al.		·	6-26-9	7
	82	6,289,203	9-11-01	Smith et al.			2-25-98	3
	83	6,317,599	11-13-01	Rappaport et al.			5-26-99)
	84	6,326,987	12-4-01	Alexander			12-19-0	00
	85	6,330,005	12-11-01	Tonelli et al.			10-6-99	
	36	6,311,144	10-30-01	Abu El Ata			7-31-98	1
	17	6,337,688	1-8-02	Berstis			1-29-99	
9	38	6,338,031	1-8-02	Lee et al.			9-23-99	
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EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP Section 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Application Number 02560038AA 09/668,145 Applicant(s) (Use several sheets if necessary) / T. Rappaport et al. Filing Date Group Art Unit APR 0 5 2005 9/25/00 U.S. PATENT DOCUMENTS EXAMINER DATE DOCUMENT NUMBER INITIAL NAME CLASS SUBCLASS FILING DATE IF APPROPRIATE 6,356,758 89 3-12-02 Almeida et al. 12-31-97 90 6,393,432 5-21-02 Flansburg et al. 6-2-99 91 6,408,312 6-18-02 Forthman et al. 8-30-99 92 6,442,507 8-27-02 Skidmore et al. 12-29-98 93 6,470,195 10-22-02 Meyer 10-31-00 6,487,417 94 11-26-02 Rossoni et al. 11-24-99 95 6,493,679 12-10-02 Rappaport et al. 5-26-99 96 6,496,290 12-17-02 Lee 12-17-98 97 6,499,006 12-24-02 Rappaport et al. 7-14-99 98 6,505,045 1-7-03 Hills et al. 4-10-00 5,586,254 12-17-96 Kondo FOREIGN PATENT DOCUMENTS REF DOCUMENT NUMBER DATE COUNTRY Franslation CLASS SUBCLASS. YES OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

Docket Number (Optional)

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP Section 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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			PATE	ES PAT	9/25/00 TENT DOCUMENTS	-		
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	100	6,085,33.5	7-4-00	Djoko e	NAME et al	CLASS	SUBCLASS	FILING DA
•	101	5,710,758	1-20-98	Soliman			·	12-31-97
	102	5,821,937	10-13-98	Tonelli		<u> </u>	1	9-29-95
	103	5,774,669	6-30-98	George	et al.			7-28-95
	104	5,802,146	9-1-98	Dulman				11-22-95
	105	5,825,759	10-20-98	Liu			11.3	7-24-95
	106	5,845,124	12-1-98	Berman				5-1-96
		6,199,032	3-6-01	Anderson	n			7-22-98
		5,467,441	11-14-95	Stone et a	al.			10-6-94
		5,994,984	6-5-01	Ghori et	al.			1-31-97
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AMINER	REF	DOCUMENT NUMBER	DATE	NAME	СІ	ASS SUBCLAS	S FILING DATE
	113	5,977,851	11-2-99	Stancil et al.			11-13-97
	114	5,755,072	5-26-98	Lingafelter			5-13-98
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		IEEE Transactions on A Urban Environments for	Antennas and pr Wireless Applic	opagation, Vol. 46, No. 8 ations'' Leonard Piazzi a	, August 1998. " Eff nd Henry L. Bertoni	ect of Terrrain (on Path Loss in
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Docket Number (Optional)

02560038AA

Application Number

Docket Number (Optional) 02560038AA	Application Number 09/668,145
Applicant(s) T. Rappaport et al.	
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*EXAMINER INITIAL		OTHER DOCUMENTS (Including Author,	Title, Date, Pertinent Pages,			
OIPE	1	P. Bahl, V. Padmanabhan, and A. Balachandra Lessons, " Microsoft Technical Report, April 20			obile Users: Design, Evaluation, an	
APR 0 5 2005	14 304	G. Durgin, T.S. Rappaport, H. Xu, Measuremer Homes and Trees at 5.85 GHz," IEEE Transact	its and Models for Radi ions on Communications	o Path Loss and s, vol. 46, no. 11	d Penetration Loss in and Around I, November 1998.	
ADEMARM	3	C.M. Peter Ho et al., "Antenna Effects on Indoo Wide-Band Propagation Model for In-Building Information Networks, Vol. 1, No. 1, 1994.	r Obstructed Wireless (Personal Communicatio	Channels and a ns Systems," It	Deterministic Image-Based nternational Journal of Wireless	
	4	S. Kim et al., "Radio Propagation Measurement Environments at 908 MHZ and 1.9 GHz," IEEE	s and Predictions Using Transactions on Vehicu	Three-dimensi lar Technology	onal Ray Tracing in Urban v, vol. 48, no. 3, May 1999	
	5	T.S., Rappaport et al., "Use of Topographic Ma Satellite Coverage for Radio Detection and Trac MPRG-TR-95-14, Virginia Tech, September 199	ps with Building Inform ding in Urban Environm	ation to Deterr ents," MPRG	nine Antenna Placements and GPS Technical Report	
	6	R.K. Morrow, Jr. and T.S. Rappaport, "Getting	In," Wireless Review M	lagazine, Marc	h 2000.	
	7	Wireless Valley Communications, Inc., "SitePlan pp.5-148 to 5-156, 1999.	ner 3.16 for Windows 9.	5/98/NT User's	Manual," Software User's Manua	
	9	M. Panjwani et al., "Interactive Computation of Environments," IEEE Journal on Selected Areas	Coverage Regions for W in Communications, Vo	Treless Commu l. 14, No. 3, Ap	nication in Multifloored factor ril 1996.	
	9	L Piazzi and H.L. Bertoni, "Achievable Acurracy Transactions on Vehicular Technology, vol. 48, no	of Site-Specific Path-Lo 3, May 1999.	oss Predictions	in Residential Environments" IEEE	
	10	T.S. Rappaport et al., "Wireless Communications Magazine, May 2002.	: Past Events and a Fut	ure Perspective	e", IEEE Communications	
1	11	T,S. Rappaport et al., "Radio Propagation Predic Embedded Wireless Microsystems," ARPA Annu 1994.	tion Techniques and Co al Report, MPRG Techr	mputer-Aided nical Report M	Channeling Modeling for PRG-TR-94-12, Virginia Tech, Jul	
	2	T.S., Rappaport et al., "Use of Topographic Map Detection and Tracking in Urban Environments," 1995	s with Building Informa MPRG Technical Repo	tion to Determ rt MPRG-TR-	ine Antenna Placements for Radio 95-14,Virginia Tech, November	
CAMINER			DATE CONSIDERED			
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*EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP Section 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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		(Use several sheets if necessary)	Applicant(s)	09/668,145			
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EXAMIN	(Pp		Filing Date 9/25/00	Group Art Unit			
INITIA	i	OTHER DOCUMENTS (Including Auth	or. Title Date Perinant D.				
		D. Ullmo et al., "Wireless Propagation in Bi Technology, Vol. 48, No. 3, May 1999.	uildings: A Statistical Scattering Approac	h " IPPP T			
*	13	rectiniology, vol. 48, No. 3, May 1999.	o manufacture reproduc	n, there transactions on Vehic			
OIPE							
ı	3	T.S. Rappapoprt, "wireless Communications	Principles and Practical Court Principles				
PR 0 5 20	هِيا 05		Para Practice Second Edition	1, Prentice Hall, 2002.			
	- E						
A TRADEM	RIT	T.S Rappaport et al., "Use of Topographic Satellite Coverage for Radio Detection and T Virginia Tech, September 1995.	Maps with Building Information 1				
MADE	15	Satellite Coverage for Radio Detection and T Virginia Tech, September 1995.	racking in Urban Environments," MPRG	nine AntennaPlacements and G Technical Report MPRG TP o			
		T.S. Rappaport et al., "Indoor Path Loss Mer produced for Motorola, December 16, 1997.	isurement for Homes and Apartments at	A CONTRACT OF THE PARTY OF THE			
	16	Production Motorola, December 16, 1997.	and Aparements at	2.4 and 5.85 GHz," private repo			
		T.S. Rappaport, "Isolating Interference," Wi	reless Review Magazine May 2000	manus annual and absorbed the second and a contract			
	17		, 174 2000.				
***************************************				·			
		Slides from T.S. Rappaport and R. Skidmore, Wireless Solutions Conference and Exposition	"Introduction to In-Ruilding Wieslass C.	The state of the s			
	18	Wireless Solutions Conference and Exposition	February 4, 2003.	stems, "Infocast In-Building			
	! !						
	:	S. Sandhu, M.P. Koushik, and T.S. Rappaport on Site Specific Propagation Prediction," MPF	Predicted Path Loss for Roslyn VA Fire	Foot of Shall While and Asset and			
	19	treatenin, MPF	G Technical Report MPRG-TR-94-20, V	riginia Tech, December 1994			
		1 2 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2					
	i	S. Sandhu, M.P. Koushik, and T.S. Rappaport, Project on Site Specific Propagation Prediction	"Predicted Path Loss for Roslyn VA, Fir	st set of predictions for ODD			
	; 30) [S. Sandhu, M.P. Koushik, and T.S. Rappaport, "Predicted Path Loss for Roslyn VA. First set of predictions for Ok- Project on Site Specific Propagation Prediction," MPRG Technical Report MPRG-TR-94-20, Virginia Tech, Mars					
	<u></u>	ie esta					
		S. Seidel et al., "Site-Specific Propagation Pred Transactions on Vehicular Technology, Vol. 43,	iction for Wireless In-Building Personal No. 4, November 1994	Communication Design 18.6.6			
	2 i		1974.				
r de quae arrive deservi e e con deser		S. Shakkattai and T.S. Daniera	·	•			
		S. Shakkottai and T.S. Rappaport, "Research C Fifth International Symposium on Wireles Pers	Challenges in Wireless Networks: A Techional Multimedia Communications, Honol	nical Overview," Proceeding of			
	22		Todo	utu, 111, October 2002.			
	 	H. Sherali et al. "On the One I.					
	į.	fl. Sherali et al., "On the Optimal Location of T IEEE Journal on Selected Areas in Communicat	ransmitters for Micro-cellular Radio Corions, Vol. Vol. 14, No. 3, pp. 662-673, Mo.	nmunication System Design,"			
	23		, , , , , , , , , , , , , , , , , , ,	y 1996.			
		R. Skidmoure et al. "A Communication					
		R. Skidmo're et al., "A Comprehensive In-Build Bradley Department of Electrical Engineering, Master's Thesis	ing and Microcellular Wireless Commun JPRG-TR-97-13, June 1997	ication System Design Tool" The			
	24	Master's Thesis - unpublished	by Virginia Tech for 2 year	s after submission.			
MINER	L	1		,			
1		•	DATE CONSIDERED				

Docket Number (Optional)

(IN	FORM	ATION DISCLOSURE CITATION	02560038AA Applicant(s)	09/668,145
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			Filing Date 9/25/00	Group Art Unit
*EXAMINER INITIAL		OTHER DOCUMENTS (Including Author,	Title, Date, Pertinent Pages, Etc.)	
		R. Skidmore, et al., Russell Senate Office Build "Project Update," AoC Contract # Acbr96088,	ling Propagation Study, Project Repo	rt for Joseph R. Loring & Associates;
E	24			
SIPER	25	R. Skidmore, et al., Russell Senate Office Build "Assessment and Study of the Proposed Enhan Office Building (RSOB) and Associated Utility of the Capitol, February 20, 1997.	ding Propagation Study, Project Repo cements of the Wireless Communicati Tunnels," AoC Contract # Acbr9608	ort for Joseph R. Loring & Associates; ions Environment of the Russell Senate 8, prepared for Office of the Architect
PR 0 5 2005		R. Torres et al., "CINDOOR: An Engineering EEE Antennas and Propagation Magazine, Vo	Tool for Planning and Design of Wire l. 41, No. 4 August 1999.	less Systems in Enclosed Spaces,"
& TRADEMARY				
-	27	R. Skidmore et al., "Interactive Coverage Regi Multi-Floored Indoor Environments: SMT Plus	on and System Design Simulation for tim, "IEEE ICUPC Proceedings, 199	Wireless Communication Systems in 6.
			·	
		T.S. Rappaport et al., "Radio Aided CHannel Modeling for Emb	Propagation Prediction Te	echniques and Computer-
		Aided CHannel Modeling for Embed MPRG-TR-95-08, Virginia Tech,	edded Wireless Missosuch	ems," MPRG Tech. Report
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Docket Number (Optional) 02560038AA	Applicati	on Number 09/6	68,145	-	
Applicant(s) T. Rappaport et al.	 •	٠			
Filing Date 9/25/00	Group A	rt Unit	-		_

*EXAMINER		9/25/00	
INITIAL	OTHER DOCUMENTS (Including Author,		OIPE
0	Company Web Page "Actix" www.actix.com p	product name: E-NOS (now E-AMS)	APR 0 5 2005
			PAREN
	Company Web Page " Agilent' www.agilent.com	n product name: OPAS32	A MADEMARY OF
	Company Web Page " Agilent " www.agilent.co	m product name: Wizard	
	Company Web Page " Comarco" www.edx.com	product name: SignalPro	
	·		
	Company Web Page " ComOpt" www. comopt.	com. product name: CellOpt AFP	
	Company Web Page " Lucent" www.bell-labs.co	om product name: WiSE	
	Company Web Page " Ericsson" www.ericsson.c	com product name: TEMS Lite	
	Company Web Page " Ericsson" www.ericsson.	com product name: TEMS	
	Company Web Page " Marconi" www.marconi.c	com product name: PlaNET	
	Company Web Page " Marconi" www.marconi.c	om product name: decibelPlanner	
	Company Web Page " Schema"www.schema.com	n product name: Optimizer	
	Company Web Page " ScoreBoard" www.scorebo	oard.com product name: ScoreBoard	
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